

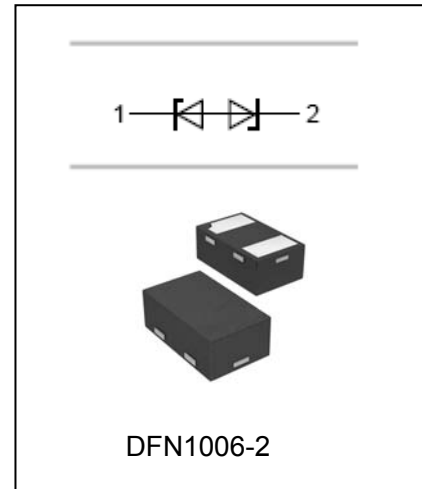
## Bi-directional ESD Protection Diode

### FEATURES

- Low diode capacitance:  $C_d = 0.35\text{pF}$ .
- AEC-Q101 qualified.
- Very low leakage current:  $I_{PPM} = 5\text{A}$ ; IEC61643-321.
- ESD protection up to 10Kv; IEC61000-4-2.
- Non-Halogen

### APPLICATIONS

- High-speed data lines.
- Portable electronics.
- Communication systems.
- Computers and peripherals.



### ORDERING INFORMATION

Type No.	Marking	Package Code
GESD5V0X1BLG	BE	DFN1006-2

### MAXIMUM RATING @ $T_a = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Limits	Unit	
Electrostatic discharge voltage IEC61000-4-2(contact discharge)	$V_{ESD}$	10	kV	
Electrostatic discharge voltage	Machine Model	400	V	
	Human Body Model	10	kV	
Reverse standoff voltage	$V_{RWM}$	5	V	
Peak pulse current	$t_p = 8/20\mu\text{s}$	$I_{PP}$	5	A
Junction temperature	$T_j$	150	$^\circ\text{C}$	
Ambient temperature	$T_{amb}$	-65 to +150	$^\circ\text{C}$	
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$	

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse breakdown voltage	$V_{BR}$	$I_R=10mA$	7	8.8	10	V
Reverse leakage current	$I_R$	$V_{RWM}=5V$	-	-	1	$\mu A$
Diode capacitance	$C_d$	$V_R=0V, f=1MHz$	-	0.5	0.6	pF
Clamping voltage(Note)	$V_C$	$I_{PP}=1A$ $I_{PP}=2A$	-	-	13 14	V
Dynamic resistance	$R_{dyn}$	$I_R=10A$	-	0.9		$\Omega$

Note: Non-repetitive current pulse 8/20 $\mu s$  exponential decay waveform according to IEC6100-4-5.  
Measured from pin 1 to pin 2.

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

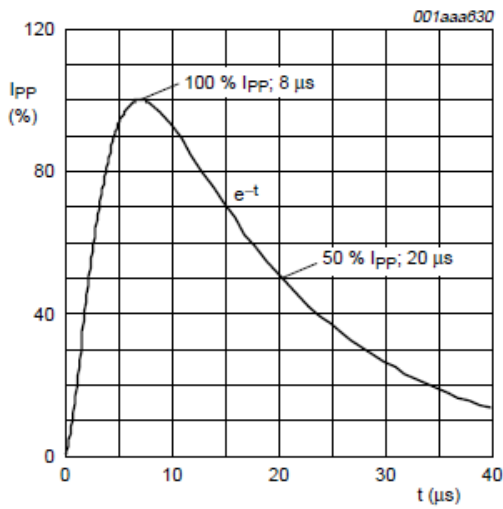


Fig1. 8/20 $\mu s$  pulse waveform according to IEC 61000-4-5

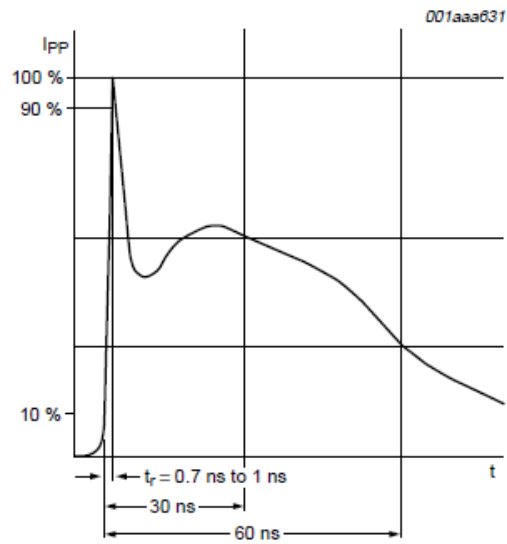
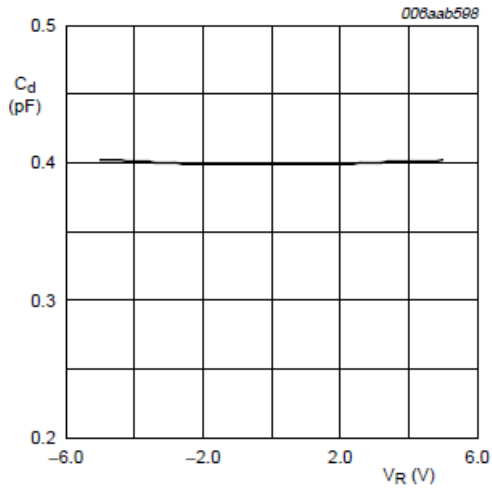


Fig 2. ESD pulse waveform according to IEC 61000-4-2



f = 1 MHz; T<sub>amb</sub> = 25 °C

Fig 3. Diode capacitance as a function of reverse voltage; typical values

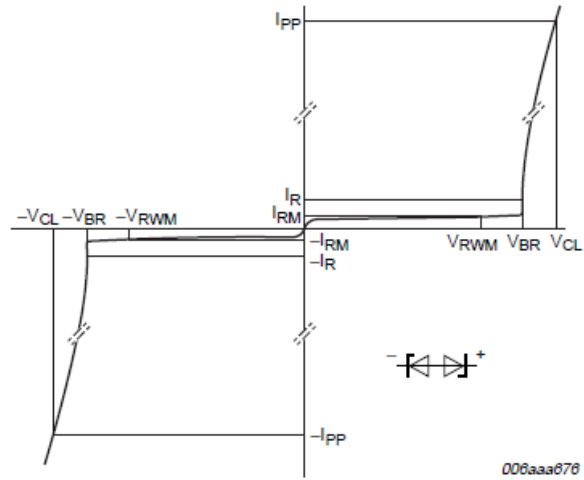
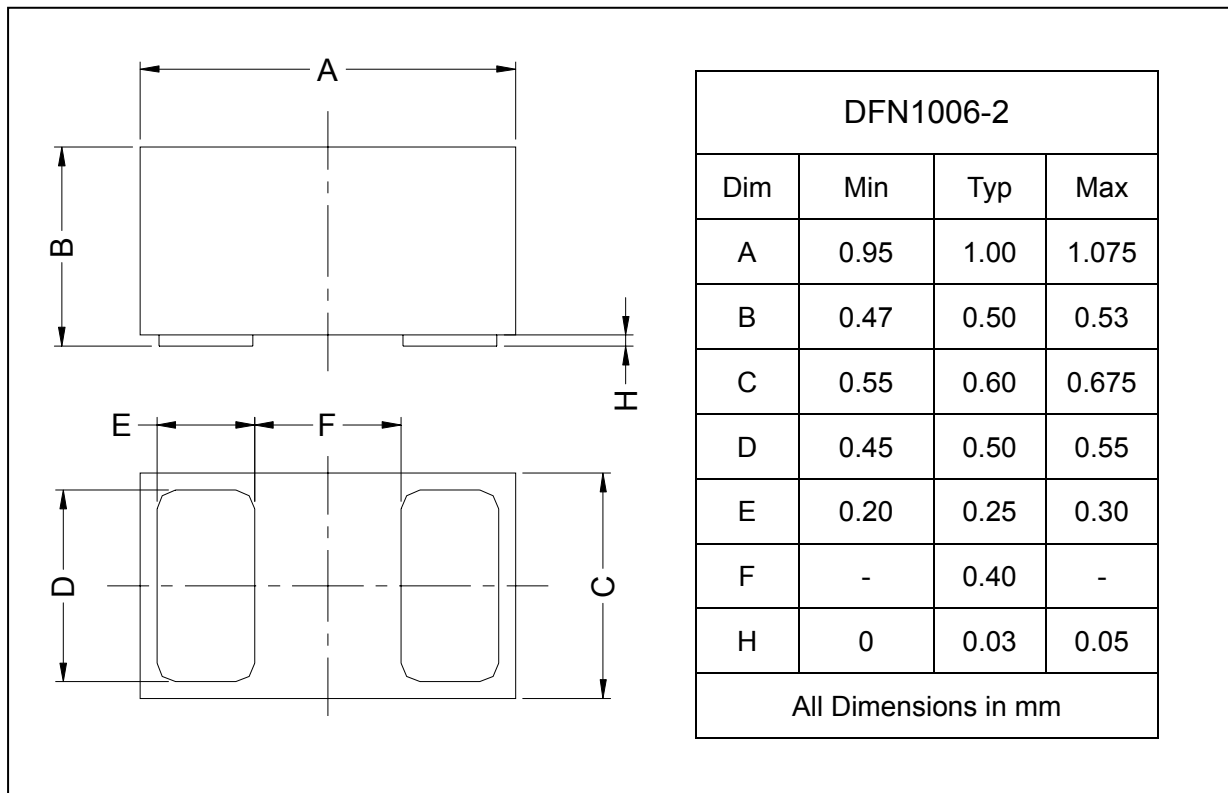


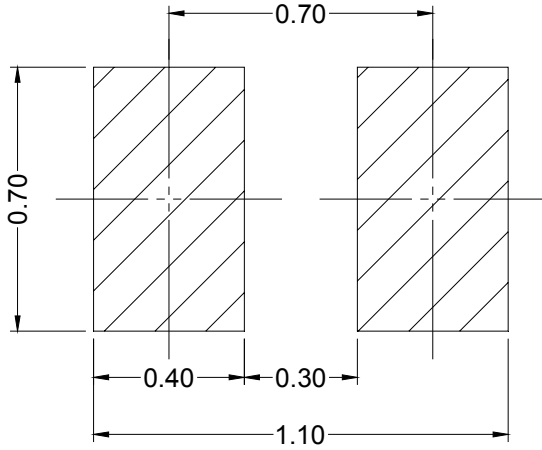
Fig 4. V-I characteristics for a unidirectional ESD protection diode

## PACKAGE OUTLINE

Plastic surface mounted package

DFN1006-2



**SOLDERING FOOTPRINT**


Unit : mm

**PACKAGE INFORMATION**

Device	Package	Shipping
GESD5V0X1BLG	DFN1006-2	5000/Tape&Reel